



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/752,938	01/06/2004	Jeffrey Gabbay	082799-000000US	5796
20350	7590	06/06/2006	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834				STITZEL, DAVID PAUL
		ART UNIT		PAPER NUMBER
		1616		

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/752,938	GABBAY, JEFFREY
	<b>Examiner</b>	<b>Art Unit</b>
	David P. Stitzel, Esq.	1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 18 April 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) 4-19 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-3 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/2/04; & 12/10/04.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## OFFICIAL ACTION

### ***Restriction/Election***

Receipt of the Applicant's Election of Invention I, encompassing claims 1-3, which was filed on April 18, 2006, in response to the Official Action mailed on January 18, 2006, is acknowledged. However, Applicant failed to provide a qualifying statement as to whether the aforementioned election was "with traverse" or "without traverse." Therefore, since the Applicant did not distinctly and specifically point out any alleged errors in the Examiner's restriction requirement, the election has been treated as an election without traverse, pursuant to MPEP § 818.03(a).

### ***Status of Claims***

Claims 4-19 are withdrawn from further consideration as being directed to a non-elected invention. As a result, claims 1-3 are currently pending and therefore examined herein on the merits for patentability.

### ***Claim Rejections - 35 U.S.C. § 112, Second Paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. § 112, which forms the basis of the claim rejections as set forth under this particular section of the Official Action:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. More specifically, claim 1 recites the limitation "water-insoluble particles." There is insufficient antecedent basis for this limitation in claim 1. Claims 2 and 3 are indefinite because said claims are dependent upon indefinite claim 1. Appropriate correction is required.

***Nonstatutory Double Patenting***

A nonstatutory double patenting rejection of the “obviousness-type” is based on a judicially created doctrine grounded in public policy so as to prevent not only the unjustified or improper timewise extension of the “right to exclude” granted by a patent, but also possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re White*, 405 F.2d 904, 160 USPQ 417 (CCPA 1969); *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968); and *In re Sarett*, 327 F.2d 1005, 140 USPQ 474 (CCPA 1964).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned or assigned with this application. See 37 CFR 1.130(b). Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

When considering whether the invention defined in a claim of an application is an obvious variation of the invention defined in the claim of a patent, the disclosure of the patent may not be used as prior art. See MPEP § 804. However, this does not mean that one is absolutely precluded from all use of the patent disclosure. See MPEP § 804. For example, the specification can always be used as a dictionary to learn the meaning of a term in the patent claim. *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Furthermore, ***those portions of the specification which provide support for the***

*patent claims may also be examined and considered* when addressing the issue of whether a claim in the application defines an obvious variation of an invention claimed in the patent. *In re Vogel*, 422 F.2d 438, 441-442, 164 USPQ 619, 622 (CCPA 1970). The court in *Vogel* stated that one must first “determine how much of the patent disclosure pertains to the invention claimed in the patent” because only “[t]his portion of the specification supports the patent claims and may be considered.” The court in *Vogel* also pointed out that “this use of the disclosure is not in contravention of the cases forbidding its use as prior art, nor is it applying the patent as a reference under 35 U.S.C. § 103, since only the disclosure of the invention claimed in the patent may be examined.”

1. Claim 1 of the instant application is provisionally rejected under the judicially created doctrine of non-statutory obviousness-type double patenting as being unpatentable over conflicting claim 16 of copending U.S. Pre-Grant Patent Application Publication 2004/0247653 (hereinafter the conflicting Gabbay ‘653 publication).

More specifically, claim 1 of the instant application is directed to a method of imparting antiviral properties to a hydrophilic polymeric material, wherein said method comprises the steps of: preparing a hydrophilic polymeric slurry; dispersing an ionic copper powder mixture of water insoluble particles of cupric oxide (CuO) and cuprous oxide (Cu<sub>2</sub>O) in said hydrophilic polymeric slurry; and extruding or molding said hydrophilic polymeric slurry to form a hydrophilic polymeric material; wherein said water insoluble particles, which release Cu<sup>++</sup> from said cupric oxide (CuO) and Cu<sup>+</sup> from said cuprous oxide (Cu<sub>2</sub>O), are completely encapsulated within said hydrophilic polymeric material.

Claim 1 of the instant application does not recite what particular polymers constitute the hydrophilic polymers claimed therein. However, one of ordinary skill in the art would have been motivated to turn to the instant specification for guidance as to what particular polymers constitute the hydrophilic polymers claimed within claim 1, which include nitrile, acrylic, polyvinyl alcohol, latex and silastic rubber, as taught by the instant application ([0013]).

Claim 16 of the conflicting Gabbay '653 publication is directed to a method of preparing an antimicrobial and antiviral polymeric material, wherein said method comprises the steps of: preparing a slurry of a polymer selected from the group consisting of a polyamide, a polyester, an acrylic, a polyalkylene, and mixtures thereof; dispersing a powder consisting essentially of water insoluble particles of cationic copper oxides in said polymeric slurry; and extruding said polymeric slurry to form a polymeric material; wherein said water insoluble particles, which release Cu<sup>++</sup>, are partially encapsulated within, and protruding from, said polymeric material.

Claim 16 of the conflicting Gabbay '653 publication does not recite that said cationic copper oxides include water insoluble particles of cupric oxide (CuO) and cuprous oxide (Cu<sub>2</sub>O). However, claim 16 of the conflicting Gabbay '653 publication teaches a method of preparing an antimicrobial and antiviral polymeric material as claimed in claim 1 of the conflicting Gabbay '653 publication, which recites water insoluble articles of ionic copper oxides in powder form, and claim 2 of the conflicting Gabbay '653 publication, which is dependent upon claim 1, further recites that said ionic copper oxides comprise a mixture of cupric oxide (CuO) and cuprous oxide (Cu<sub>2</sub>O). Thus, although claim 16 of the conflicting Gabbay '653 publication only recites releasing Cu<sup>++</sup> from cupric oxide (CuO), it would have been prima facie obvious to one of ordinary skill in the art that Cu<sup>+</sup> must also be intrinsically released from said water insoluble articles, since said water ionic copper oxides also

comprise cuprous oxide ( $Cu_2O$ ), as claimed in claims 1 and 2 of the conflicting Gabbay '653 publication.

While the method steps claimed in claim 1 of the instant application are substantially similar, if not identical, to the method steps claimed in claim 16 of the conflicting Gabbay '653 publication, claim 1 of the instant application recites that said water insoluble particles are completely encapsulated within said hydrophilic polymeric material, while claim 16 of the conflicting Gabbay '653 publication recites that said water insoluble particles are partially encapsulated within, and protruding from, said polymeric material. Regardless of whether said water insoluble particles are either completely or only partially encapsulated within said polymeric material, or alternatively initially completely encapsulated within said polymeric material, and subsequently thereafter only partially encapsulated within said polymeric material, due to said water insoluble particles migrating through the interstitial spaces of the polymeric matrix of said polymeric material and to the surface thereof, claim 1 of the instant application and claim 16 of the conflicting Gabbay '653 publication are not patentably distinct each from the other because said claims are substantially overlapping in scope as discussed hereinabove. This is a provisional non-statutory double patenting rejection since the conflicting claims have not yet been patented.

***Claim Rejections - 35 U.S.C. § 102***

The following is a quotation of the appropriate paragraph of 35 U.S.C. § 102, which forms the basis of the anticipation rejections as set forth under this particular section of the Official Action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,180,585 (hereinafter the Jacobson '585 patent) as evidenced by U.S. Patent 4,931,078 (hereinafter the Yamamoto '078 patent).

With respect to claims 1-3 of the instant application, the Jacobson '585 patent discloses a method of imparting antimicrobial properties to a synthetic polymer, wherein said method comprises the steps of: slurring a suspension of said synthetic polymer, an inorganic antimicrobial powder mixture of water insoluble particles of copper (II) oxide (a.k.a., cupric oxide or CuO, which contains divalent copper or Cu<sup>++</sup>) and copper (I) oxide (a.k.a., cuprous oxide or Cu<sub>2</sub>O, which contains univalent copper or Cu<sup>+</sup>), and a formaldehyde reducing agent; and extruding or molding said synthetic polymer having said inorganic antimicrobial powder mixture of water insoluble particles of copper and said formaldehyde reducing agent uniformly dispersed and incorporated within the polymeric matrix of said synthetic polymer to form an antimicrobial polymeric material; wherein said synthetic polymer is selected from the group consisting of: polyamides (i.e., nylon), polyolefins (i.e., polyethylene and polypropylene), polyvinylalcohol, polyesters and acrylics; wherein said inorganic powder mixture of water insoluble particles of copper possess a broad spectrum of antimicrobial properties including bactericidal, fungicidal and viricidal properties (column 1, lines 1-33; columns 2-4; column 5, lines 29-68; column 6, lines 1-21; column 8, lines 40-68; columns 9-12). Although the Jacobson '585 patent discloses reducing copper with said formaldehyde reducing agent (column 5, lines 56-68; column 6, lines 1-21), the Jacobson '585 patent does not explicitly disclose reducing copper (II) oxide to copper (I) oxide via an oxidation-reduction reaction, as claimed in claim 2 of the instant application.

Although only one reference should normally be used in making a rejection under 35 U.S.C. § 102, such a rejection made utilizing multiple secondary references has been held to be proper when the

extra references are merely cited to show that a characteristic not explicitly disclosed in the primary reference is inherent therein. See MPEP § 2131.01 Multiple Reference 35 U.S.C. § 102 Rejections.

It was very well known in the art at the time the instant application was filed that copper (II) oxide is reduced to copper (I) oxide via an oxidation-reduction reaction in the presence of a reducing agent, as evidenced by the Yamamoto '078 patent, which discloses that cupric oxide, which is stable but does not exhibit efficacious germicidal properties, is reduced to cuprous oxide, which exhibits efficacious germicidal properties but is unstable, in the presence of a reducing agent (column 1, lines 56-68).

Therefore, although the Jacobson '585 patent does not explicitly disclose reducing copper (II) oxide to copper (I) oxide via an oxidation-reduction reaction, as claimed in claim 2 of the instant application, doing so is not necessary, as the aforementioned oxidation-reduction reaction is an inherent characteristic of an antimicrobial polymeric material comprising a synthetic polymer, an inorganic antimicrobial powder mixture of water insoluble particles of copper (II) oxide and copper (I) oxide, and a formaldehyde reducing agent.

### ***Conclusion***

Claims 1-3 are rejected because the claimed invention is anticipated since each and every element of the claimed invention, as a whole, is disclosed in the cited prior art references.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to David P. Stitzel, M.S., Esq. whose telephone number is 571-272-8508. The Examiner can normally be reached on Monday-Friday, from 7:30AM-6:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Johann Richter, Ph.D., Esq., can be reached at 571-272-0646. The central fax number for the USPTO is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published patent applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished patent applications is only available through Private PAIR. For more information about the PAIR system, please see <http://pair-direct.uspto.gov>. Should you have questions about acquiring access to the Private PAIR system, please contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*David P. Stitzel, M.S., Esq.  
Patent Examiner  
Technology Center 1600  
Group Art Unit 1616  
May 2, 2006*

  
*Johann Richter, Ph.D., Esq.  
Supervisory Patent Examiner  
Technology Center 1600  
Group Art Unit 1616*